

REMARKS

Applicant respectfully requests reconsideration. Claims 36, 37 and 54-73 were pending for examination. By this Amendment, Applicant is amending claims 36 and 73 without prejudice or disclaimer. New claims 74-77 have been added. Support for the claim amendments and newly added claims can be found, for example, in the specification on page 8, lines 15-27, and on page 12, lines 23-33. Claims 36, 37 and 54-77 are, therefore, pending for examination with claims 36 and 73 being independent claims. Applicant expressly reserves the right to pursue any subject matter canceled herein in this or one or more continuing applications.

No new matter has been added.

Interview Summary

Applicant respectfully thanks Examiner Smith for conducting an interview with Applicant's representative. During the interview the outstanding rejections and possible claim amendments were discussed. While no final agreement was reached, the Examiner did indicate that alternate language in regard to values for the nature and degree of sulfation or acetylation may be useful in overcoming the obviousness rejections put forth in the currently outstanding Final Office Action.

Rejection under 35 U.S.C. §112

Claims 36, 37 and 54-72 are rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant respectfully traverses. However, in the interest of expediting prosecution, and without conceding the correctness of this rejection, Applicant has removed the phrase "the identifier". Therefore, Applicant believes that this rejection is now moot.

Reconsideration and withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. §103

Claims 36, 37, 54-64 and 66-73 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over van Kuik et al. (Carbohydrate Research, 235:53-68, 1992) in view of Bohne et al. (J. of Mol. Modeling, 4:33-43, 1998).

Applicant respectfully traverses. However, in the interest of expediting prosecution of the instant application, and without conceding the correctness of this rejection, Applicant has amended independent claims 36 and 73. Claim 36 has been amended to recite that one or more of the values of the second data structure correspond to the nature and degree of sulfation or acetylation of the monosaccharide or disaccharide of the polysaccharide. Claim 73 has been amended so that the claim recites "heparin-like glycosaminoglycan" instead of "polysaccharide".

Applicant notes that none of the references cited by the Examiner alone or in combination teach or make obvious a value that corresponds to the nature and degree of sulfation or acetylation or the use of such a value to compare monosaccharides or disaccharides of a polysaccharide. The Examiner argues that van Kuik et al. teach preparing oligosaccharides involving sulfosalicylic acid, 1% sodium dodecyl sulfate and 73 U of peptide-N-(N-acetyl- β -D-glucosaminyl)-asparagine amidase F and that this teaching represents properties comprising the nature and degree of sulfation and acetylation as stated in instant claims 66 and 67.

Applicant strongly disagrees. Again, as argued in the response to the previous office action, the teachings referred to by the Examiner of van Kuik et al., merely provide how the oligosaccharides used in the van Kuik et al. method were obtained. The reference does not teach the nature and degree of sulfation or acetylation of the oligosaccharides that were created, provide any values that correspond to the nature and degree of sulfation or acetylation, or teach that values that correspond to the nature and degree of sulfation or acetylation can be used for any purpose, such as for comparing monosaccharides or disaccharides of a polysaccharide.

Further, Applicant notes that none of the references alone or in combination teach or make obvious methods for determining whether a disaccharide of a query sequence matches a disaccharide of a heparin-like glycosaminoglycan. In fact, none of the references even refer to heparin-like glycosaminoglycans let alone a disaccharide of a heparin-like glycosaminoglycan. The Examiner has attempted to argue that Table 1 of each of van Kuik et al. and Bohne et al. refers to the monosaccharides GalNAc and GlcNAc, which the Examiner alleges are

monosaccharides of heparin-like glycosaminoglycans. However, even if *arguendo* these monosaccharides can be found in heparin-like glycosaminoglycans, which Applicant is not conceding is the case, the Examiner has not demonstrated that these monosaccharides or the disaccharides that may contain them as found in the cited references are indeed from heparin-like glycosaminoglycans. Further, the references do not teach or suggest values corresponding to properties of monosaccharides or disaccharides of heparin-like glycosaminoglycans or that such values can be used to compare monosaccharides or disaccharides of a query sequence with monosaccharides or disaccharides of a heparin-like glycosaminoglycan.

Finally, Applicant notes that the Examiner has attempted to combine van Kuik et al. with Bohne et al. However, Applicant would like to note for the record that the teachings of Bohne et al. merely provide for methods of determining the three-dimensional structure of *known* carbohydrates. This is very different from and not at all related to methods of determining whether monosaccharides or disaccharides of a query sequence match those of a known sequence. The Examiner has not adequately established that one of ordinary skill in the art would have combined the very disparate teachings of the cited references or why one would do so. Further, the Examiner has also not demonstrated a reasonable expectation of success in obtaining Applicant's claimed methods. Again, Bohne et al. has nothing to do with methods of determining whether monosaccharides or disaccharides of a query sequence match those of a known one, and as such, the teachings of Bohne et al. do not at all supplement the teachings of van Kuik et al. for performing the methods in question. Further, Applicant maintains that it is a substantial leap from van Kuik et al. to attempt to obtain Applicant's claimed methods. The Examiner has not demonstrated that there is indeed a reasonable expectation of success in obtaining Applicant's claimed methods using the teachings of the cited references alone or in combination.

Reconsideration and withdrawal of this rejection is respectfully requested.

Claim 65 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over van Kuik et al. and Bohne et al. as applied to claims 36, 37, 54-64 and 66-73 above, and further in view of Van Kuik et al. (Trends in Biotechnology, 10:182-5, 1992).

Applicant respectfully traverses. Again, as described above, in the interest of expediting prosecution of the instant application, and without conceding the correctness of this rejection, Applicant has amended independent claims 36 and 73. Further, Applicant reiterates the arguments presented above and asserts that the additional van Kuik et al. reference does not remedy the aforementioned deficiencies.

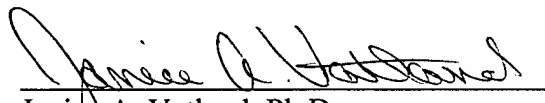
Reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,



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